In the Claims

1. (currently amended) ~~A standalone intelligent device for coupling an electronic device to a network~~ An intelligent data concentrator, comprising:

a first interface for communicatively coupling, at an internal space in a wall, said ~~standalone~~ intelligent ~~device~~ data concentrator to said network, said network having a head end, wherein said head end is a central control site operable to remotely access said ~~standalone~~ intelligent ~~device~~ data concentrator over said network;

a second interface comprising a plurality of communication ports for communicatively coupling, at an external surface of the wall, said ~~standalone~~ intelligent ~~device~~ data concentrator to a plurality of client devices at said plurality of communication ports such that said client devices are communicatively coupled to said network;

means for processing and interpreting data coupled to said first interface; and

fault detection means coupled to said means for processing and interpreting data, said fault detection means for performing fault detection in said network.

2. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 1 wherein said head end is operable to remotely access said means for processing and interpreting data.

3. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 1 wherein said fault detection means is

configured to isolate faults in both an uplink from said head end of said network and a downlink from said head end of said network.

4. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 1 wherein said fault detection means is selected from the group consisting essentially of:

a link beat signal fault detection, a ping signal fault detection, and a loop-back mode for fault detection.

5. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 1 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator is configured such that said ~~standalone~~ intelligent ~~device~~ data concentrator is provided power over said network.

6. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 5 wherein said head end is configured to activate and deactivate said ~~standalone~~ intelligent ~~device~~ data concentrator over said network.

7. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 5 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator is configured to activate and deactivate said client devices.

8. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 1 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator employs time domain reflectometry measurement techniques such that said fault detection means is operable to determine a

distance from said ~~standalone~~ intelligent ~~device~~ data concentrator to said fault.

9. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 1, wherein said ~~standalone~~ intelligent ~~device~~ data concentrator is configured to receive data packets from said head end.

10. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 9 wherein said data packets are for operating diagnostic tests at said ~~standalone~~ intelligent ~~device~~ data concentrator for validating network connections.

11. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator for coupling an electronic device to a network comprising:

a first interface for communicatively coupling, at an internal space in a wall, said ~~standalone~~ intelligent ~~device~~ data concentrator to said network, said network having a head end, wherein said head end is a central control site operable to remotely access said standalone intelligent device over said network;

a second interface, at an external surface of the wall, comprising a plurality of communication ports for communicatively coupling said ~~standalone~~ intelligent ~~device~~ data concentrator to a plurality of client devices at said plurality of communication ports such that said client devices are communicatively coupled to said network;

a robust processor coupled to said first interface; and

a fault detector coupled to said robust processor.

12. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 11 wherein said head end is operable to remotely access said robust processor.

13. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 11 wherein said fault detector is configured to isolate faults in both an uplink from said head end of said network and a downlink from said head end of said network.

14. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 11 wherein said fault detector is selected from the group consisting essentially of: a link beat signal fault detector, a ping signal fault detector, and a loop-back mode for fault detection.

15. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 11 wherein said intelligent ~~device~~ data concentrator is configured such that said ~~standalone~~ intelligent ~~device~~ data concentrator is provided power over said network.

16. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 15 wherein said head end is configured to activate and deactivate said ~~standalone~~ intelligent ~~device~~ data concentrator over said network.

17. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 15 wherein said ~~standalone~~ intelligent

~~device~~ data concentrator is configured to activate and deactivate said client devices.

18. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 11 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator employs time domain reflectometry measurement techniques such that said fault detection means is operable to determine a distance from said ~~standalone~~ intelligent ~~device~~ data concentrator to said fault.

19. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 11 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator is configured to receive data packets from said head end.

20. (currently amended) ~~A standalone intelligent device~~ An intelligent data concentrator as recited in Claim 19 wherein said data packets are for operating diagnostic tests at said ~~standalone~~ intelligent ~~device~~ data concentrator for validating network connections.

21. (currently amended) A method for fault detection in a network, said method comprising the steps of:

a) providing ~~a standalone intelligent device~~ an intelligent data concentrator coupled to a network, said ~~standalone~~ intelligent ~~device~~ data concentrator comprising a first interface for communicatively coupling, at an internal space in a wall, said ~~standalone~~ intelligent ~~device~~ data concentrator to said network, a second interface comprising a plurality of

communication ports for communicatively coupling, at an external surface of the wall, said ~~standalone~~ intelligent ~~device~~ data concentrator to a plurality of client devices at said plurality of communication ports, a robust processor coupled to said first interface, and a fault detector coupled to said robust processor, said network having a head end, wherein said head end is a central control site operable to remotely access said ~~standalone~~ intelligent ~~device~~ data concentrator over said network;

b) monitoring said network for a fault by said ~~standalone~~ intelligent ~~device~~ data concentrator and said head end, such that said ~~standalone~~ intelligent ~~device~~ data concentrator and said head end operate in conjunction.

22. (previously presented) A method as recited in Claim 21 wherein said head end is operable to remotely access said robust processor.

23. (Original) A method as recited in Claim 21 wherein said fault detector is configured to isolate faults in both an uplink from said head end of said network and a downlink from said head end of said network.

24. (Original) A method as recited in Claim 21 wherein said fault detector is selected from the group consisting essentially of: a link beat signal fault detector, a ping signal fault detector, and a loop-back mode for fault detection.

25. (currently amended) A method as recited in Claim 21 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator is configured such that said intelligent ~~device~~ data concentrator is provided power over said network.

26. (currently amended) A method as recited in Claim 25 wherein said head end is configured to activate and deactivate said intelligent ~~device~~ data concentrator over said network.

27. (currently amended) A method as recited in Claim 25 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator is configured to activate and deactivate said client devices.

28. (currently amended) A method as recited in Claim 21 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator employs time domain reflectometry measurement techniques such that said fault detection means is operable to determine a distance from said ~~standalone~~ intelligent ~~device~~ data concentrator to said fault.

29. (currently amended) A method as recited in Claim 21 wherein said ~~standalone~~ intelligent ~~device~~ data concentrator is configured to receive data packets from said head end.

30. (currently amended) A method as recited in Claim 29 wherein said data packets are for operating diagnostic tests at said ~~standalone~~ intelligent ~~device~~ data concentrator for validating network connections.